

## **REMARKS/ARGUMENTS**

### **1. Amendment to the Specification:**

Paragraph [0038] is amended to describe the first floating BM shielding layer 42A  
5 overlaps across the source electrode S of the thin film transistor 38b, and that had been  
illustrated in Figs. 3B-3E.

Paragraph [0046] is amended to clearly describe that the spacing between the data  
line 34a and the periphery of the first floating BM shielding layer 42A is smaller than the  
10 spacing between the second data line 34b and the periphery of the second floating BM  
shielding layer 42B, which had been illustrated in Fig. 6 already.

Therefore, no new matter is added. Acceptance of the amendment of the  
specification is politely requested.

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### **2. Regarding the inventorship:**

This application currently names joint inventors. In considering patentability of the  
claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the  
various claims was commonly owned at the time any inventions covered therein were  
20 made absent any evidence to the contrary. Applicant is advised of the obligation under 37  
CFR 1.56 to point out the inventor and invention dates of each claim that was not  
commonly owned at the time a later invention was made in order for the examiner to  
consider the applicability of 35 U.S.C 103(c) and potential 35 U.S.C. 102(e), (f) or (g)  
prior art under 35 U.S.C. 103(a).

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### **Response:**

All of the claims in this application are commonly owned by the joint inventors.

Applicant respectfully requests the Examiner to consider the application under this condition.

**3. Cancellations of claims 8-28:**

5        Claims 8-28 are canceled because they are non-elected species.

**4. Rejections to claims 1-4:**

10        Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of Okada et al., (Okada), USPAT 6,633,360. Reasons for rejection were shown on pages 3-4 of the above-mentioned Office Action.

**Response:**

15        Claim 1 has been amended for clearly defining the structure of the liquid crystal display. The amended claim 1 is listed as below:

Claim 1:"A liquid crystal display including a plurality of pixel areas, each pixel area comprising:

20        a pixel area defined by a first transverse-extending gate line, a second transverse-extending gate line, a first lengthwise-extending data line, and a second lengthwise-extending data line;

         a pixel electrode formed overlying the pixel area;

         a switching element electrically connected to the pixel electrode;

25        a thin film transistor positioned on one of the first or the second transverse-extending gate lines, comprising a source electrode and a drain electrode; and

         a first shielding layer directly connected to the first gate line, wherein *the first shielding layer is parallel to the first data line and adjacent to the first data line, and overlaps across the source electrode of the thin film transistor.*"

Referring to Figs. 3B-3E of this application, the second gate line 32b and the first floating BM shielding layer 42A are first formed, wherein the first floating BM shielding layer 42A is directly connected to the second gate line 32b. Then, the thin film transistor 38b is formed above the first floating BM shielding layer 42A. It should be noted that the source electrode S is protrudent from the second gate line 32b and contacts the first data line 34a. Therefore, the first floating BM shielding layer 42A overlaps across the source electrode S of the thin film transistor 38b. The amended claim 1 is fully supported by the specification and the Figures. No new matter is introduced.

Referring to Fig. 10 of Okada's application, the light shield film 135 is S-shaped bar positioned between adjacent pixel electrodes. However, the light shield film 135 never overlaps the thin film transistor 125 nor cross the source electrode of the thin film transistor 125. In addition, the AAPA does not disclose forming a light floating BM shielding layer overlapping across the source electrode of a thin film transistor. Therefore, the combination of the AAPA and Okada's application does not disclose all the limitations in the amended claim 1 of this application, thus the amended claim 1 should be allowable. Reconsideration of claim 1 is politely requested.

In regard to claims 2-4, since they are dependent upon claim 1, they should be allowable if the amended claim 1 is allowable. Reconsideration of claims 2-4 is hereby requested.

#### **5. Rejection to claim 5:**

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Okada and further in view of Watanabe et al., (Watanabe), USPAT 5,859,677. Reasons for rejection were shown on page 5 of the above-mentioned Office Action.

**Response:**

Claim 5 is dependent upon claims 1 and 3, thus it should be allowable if the amended claim 1 and claim 3 are allowable. Reconsideration of claim 5 is politely requested.

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**6. Rejection to claim 6:**

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Okada and Watanabe and in view of Song (US. Patent No. 6,788,356). Reasons for rejection were shown on page 6 of the above-mentioned Office Action.

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**Response:**

Referring to Figs. 6-7 and paragraph [0046]-[0047] of this application, the first floating BM shielding layer 42A is positioned adjacent to the first data line 34a, while the second floating BM shielding layer 42B is positioned adjacent to the second data line 34b.

15 *The two separate floating BM shielding layers 42A and 42B have asymmetrical widths.*

The spacing between the first data line 34a and the periphery of the pixel electrode 36, overlapping the first floating BM shielding layer 42A, is a liquid crystal reverse region, and the spacing between the second data line 34b and the pixel electrode 36, overlapping the second floating BM shielding layer 42B, is a liquid crystal non-reverse region.

20 Accordingly, this application provides *the first floating BM shielding layer 42A with a width larger than that of the second floating BM shielding layer 42B, which has an advantage to prevent light leakage in liquid crystal reverse region.*

With reference to Fig. 2 and col. 5, lines 25-38 of Song's application, there is only a black matrix 94 positioned right below the data line 62, thus *Song never teaches forming two separate shielding layers with asymmetrical widths at two sides of one data line 62.* Furthermore, Song only mentions that the distance (b) of an overlapping portion of the pixel electrode 82 and the black matrix 94 is smaller than the distance (c) from the pixel

electrode 82 and the data line 62 in one side of the data line 62, *but never mentions the black matrix 94 has different width at two sides of the data line 62. Therefore, Song does not disclose two separate shielding layers with different widths, which is limited in claim 6 of this application.* Moreover, none of the above-mentioned cited prior arts suggest  
5 designing a BM shielding layer wider than another one at two sides of the data line for preventing light leakage in a liquid crystal reverse region. Therefore, the combination of the cited prior arts does not disclose the limitation in claim 6 of this application and cannot meet the advantage provided by the structure described in claim 6. Accordingly, claim 6 should be allowable. Reconsideration of claim 6 is politely requested.

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**7. Rejection to claim 7:**

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Okada and further in view of Song. Reasons for rejection were shown on pages 6-7 of the above-mentioned Office Action.

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**Response:**

Claim 7 is dependent upon claim 3, and therefore it should be allowable if claims 1 and 3 are allowable. Reconsideration of claim 7 is thereby requested.

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**8. Introduction of New Claims:**

Claims 9-10 are added for detailed describing the liquid crystal display of this application. Claim 9 mentions that the first shielding layer partially overlaps the periphery of the pixel electrode to form an overlapping portion that serves as a complementary capacitor, which can compensate for lost capacitance of the adjacent storage capacitor if  
25 need be (paragraph [0040], lines 12-25). Claim 10 describes that the spacing between the first data line and the periphery of the first shielding layer is smaller than the spacing between the second data line and the periphery of the second shielding layer (Figs. 6-7 and paragraph [0046]). Therefore, newly added claims 9-10 are fully supported by the

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specification and figures, and no new matter is introduced. Since the above-mentioned  
cited prior arts never mention or disclose to form a complementary capacitor by an  
overlapping portion of the shielding layer and the pixel electrode, nor teach forming  
different spacings between two adjacent data lines and shielding layers. Claims 9-10  
5 should be allowable. Acceptance and consideration of claims 9-10 is politely requested.

Applicants respectfully request that a timely Notice of Allowance be issued in this  
case.

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Sincerely yours,



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is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)